

REMARKS/ARGUMENTS

Claim Amendments

The Applicant has amended claim 18. Applicant respectfully submits no new matter has been added. Accordingly, claims 1-18 and 22-24 are pending in the application. Favorable reconsideration of the application is respectfully requested in view of the foregoing amendments and the following remarks.

Claim Rejections – 35 U.S.C. § 103 (a)

Claims 1-3, 7-10 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bright et al (US Patent Publication 2002/0169883, hereinafter Bright) in view of Easley (US Patent Publication 2007/0093245). The Applicant respectfully traverses the rejection of these claims.

The Applicant's present invention teaches that connectivity plane messages and network plane messages need not be routed together through the same sequence of network nodes. A routing scheme is provided where connectivity plane messages are routed separately from network plane messages to a mobile terminal via a connectivity plane network node within the geographical vicinity of the mobile terminal. Positional information identifying the location of the mobile terminal is used to select an appropriate connectivity plane node for routing connectivity plane messages. Since there is probably more than one node near the mobile at the time of transmission, the mobile has to make a choice and the choice is based on the geographical location of the mobile terminal. Connectivity messages may be routed to the mobile terminal through a node that has been selected to minimize the use of system resources. This permits routing pathways of connectivity messages and network control messages to be separately optimized. Briefly, nodes near the mobile terminal are determined and the connectivity plane messages are routed to the terminal via nodes that are geographically near the terminal.

The Applicant respectfully directs the Examiner to claim 1.

1. (Previously Presented) A method of routing a connectivity plane message to a mobile terminal, in a radio network, which can be reached via two or more network nodes of a first type, comprising the steps of:

determining positional information, by a network node of a second type to which the mobile terminal is attached, indicating the geographical location of the mobile terminal and routing information, the routing information being associated with the network node of a second type;

based on the positional information, selecting a network node of the first type via which the connectivity plane message is to be routed to the mobile terminal;

designating a roaming number based on the selected network node of the first type;

sending the roaming number by the network node of the second type; and

routing the connectivity plane message to the mobile terminal via the selected network node of the first type. (emphasis added)

The Applicant respectfully asserts that the cited art, Bright and Easley, do not disclose the emphasized limitations, either individually or in combination.

The Bright reference is concerned with a processor in a home location register (HLR) capable of handling multiple protocols. There are two networks of different protocols involved and Bright discloses the processor in the HLR constructed to generate network messages according to two network protocols. The cited portion of Bright (para [0059]) is directed to a call from a GSM system terminating in ANSI. An IAM is sent to a mediation device (not present in the present invention) which stores a relayed PRN from the GSM system. The PRN message is converted and sent to the ANSI HLR. Therefore, the Bright reference changes protocol of a message so that the receiving HLR can read it. Bright is concerned with routing messages/calls with different protocols via the HLR, not locating a nearby node for sending messages to the mobile terminal.

As discussed in the Detailed Action, Bright does not teach IAM containing positional information. The Easley reference is cited for teaching positional information being received from the routing information (paragraph [0059]). The Applicant respectfully notes that the Applicant's present invention is directed to locating a mobile phone by using a nearby node so that messages can be transferred to and from the mobile by that nearby node. The cited portion of Easley discloses routing "Laura's call" in a conventional manner that includes use of an IAM. Nowhere in the cited portion is the location or position of Laura mentioned. In fact, nowhere in the Easley reference is

physical location of the calling party or the called party mentioned or taught. All 'location' references are related to the operation and use of a Home Location Register. The Applicant respectfully submits that the Easley reference does not teach positional information being received in a separate field element of the IAM. True, a point code that identifies an MSC that is serving Laura is included in the IAM, but the location of the MSC is not pertinent to the claim and is not a node near to Laura that is used to provide positional information.

To summarize, the Bright reference does not teach or discuss the use of positional information to determine routing of connectivity plane messages, nor does the Easley reference. Also, neither the Bright nor Easley references disclose selecting a node from among two or more different nodes that are connected to the mobile terminal and based on the positional information, routing a connectivity plane message through the selected node.

This being the case, the Applicant respectfully asserts that neither Bright nor Easley disclose, teach or suggest, individually or in combination, the above discussed limitations in claim 1 and analogous claim 15. Claims 2-3, 7-10 and 18 depend respectively from claims 1 and 15. The Applicant requests the allowance of these claims.

Claim 22 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bright et al (US Patent Publication 2002/0169883, hereinafter Bright) and Easley (US Patent Publication 2007/0093245) in view of Baird et al (US Patent 7539179, hereinafter Baird). The Applicant respectfully traverses the rejection of this claim.

The Baird reference is cited for teaching a combined network node comprising an MGW and SGW. The Applicant respectfully submits that Baird does not supply the missing limitations of claim 1. Therefore, the combination of Bright and Baird do not disclose, teach or suggest, individually or in combination, the above discussed limitations in claim 1. The Applicant requests the allowance of claim 22.

Claim 23 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bright et al (US Patent Publication 2002/0169883, hereinafter Bright) and Gitner (US Patent 5579375) in view of Baird et al (US Patent 7539179, hereinafter Baird). The Applicant respectfully traverses the rejection of this claim.

The Baird reference is cited for teaching a combined network node comprising an MGW and SGW. The Ginter reference is not discussed in the Detailed Action, but the Applicant is confident that Ginter and Baird in combination with the Bright reference do not teach or suggest, individually or in combination, the above discussed limitations in claim 15. The Applicant respectfully requests the allowance of claim 23.

Claims 4-6 and 16-17 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bright and Easley as applied to claim 1 above and further in view of Lin (US Patent Publication 2002/0196770). The Applicant respectfully traverses the rejection of these claims.

The Lin reference is cited for disclosing a network with split architecture. The Lin reference does not, however, disclose the limitations that are also lacking in the Bright and Easley references. Therefore, the combination of Bright, Easley and Lin do not disclose, teach or suggest, individually or in combination, the above discussed limitations in claim 1. The Applicant requests the allowance of claims 4-6 and 16-17.

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bright et al (US Patent Publication 2002/0169883) in view of Ginter (US Patent 5579375). The Applicant respectfully traverses the rejection of these claims.

As previously discussed, the Bright reference lacks particular limitations that the Applicant's claim 15 contains. One of those particular limitations is the lack of the use of location/geographical information. The Ginter reference is cited for teaching a Location Request message indicating the geographical location of the mobile terminal. Bright makes no mention or teaching or suggestion of the need for the location of a mobile terminal. Therefore, the Applicant believes that the references are combined using the

Applicant's application as a template for reconstruction of the claim. Thus, the reasons for rejection are not proper and claim 23 should be allowed.

Claim 24 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Bright et al (US Patent Publication 2002/0169883) in view of Easley (US Patent Publication 2007/0093245) and Wang et al (US Patent 7180896, hereinafter Wang). The Applicant respectfully traverses the rejection of this claim.

The Wang reference is cited for employing a network control plane and a connectivity plane. The Applicant believes that Wang is moot regarding the present invention. Even though Wang discloses separate planes for control and data, Wang lacks the limitations that are also lacking in Bright and Easley and none of the references teach or suggest the missing limitations. As discussed above, the Bright reference does not teach, suggest or discuss the use of positional information to determine routing of connectivity plane messages, nor does the Easley reference. Bright and Easley also do not disclose, individually or in combination, the use of an IAM containing positional information as neither discloses the use of positional information (as disclosed and claimed by the Applicant). Also, neither the Bright nor Easley references disclose selecting a node from among two or more different nodes that are connected to the mobile terminal and then based on the positional information, routing a connectivity plane message through the selected node. This being the case, the Applicant respectfully requests the allowance of claim 24.

CONCLUSION

In view of the foregoing remarks, the Applicant believes all of the claims currently pending in the Application to be in a condition for allowance. The Applicant, therefore, respectfully requests that the Examiner withdraw all rejections and issue a Notice of Allowance for all pending claims.

The Applicant requests a telephonic interview if the Examiner has any questions or requires any additional information that would further or expedite the prosecution of the Application.

Respectfully submitted,



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